UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/052,917	GULATI ET AL.
	Examiner	Art Unit	
	Anthony Sol	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _20 December 2005_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-19_ is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-19_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All   b)☐ Some *   c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

- Applicant's Amendment filed 12/20/2005 is acknowledged.

- Claims 1, 12-15, 18, and 19 have been amended.

- No claims have been canceled.

- No claims have been added.

- Claims 1-19 remain pending.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. Patent No. 5,412,652 ("Lu") in view of U.S. Patent No. 6,343,083 B1

("Mendelson").

Regarding claim 1,

Lu discloses that the ring table includes ring provisioning tables and embedded

SONET ring path identification (Col. 7, lines 56-58; claim 1 – defining a route including a

working path for a permanent sub-network connection in the network of nodes from an

ingress node to an egress node; claim 1 – provisioning the route).

Lu further discloses that during the initiation or reconfiguration of a SONET ring, a ring table is downloaded through a communication channel and is stored in the memory in each of the network elements (Col. 7, lines 47-50; claim 1 – distributing a route description to each node along the route from the ingress node to the egress node; claim 1 – configuring each node along the route in accordance with the route description to provide data traffic services from the ingress node to the egress node).

Lu still further discloses that the protection channels are used for restoring normal traffic when a node failure of fiber cut occurs (col. 8, lines 28-33).

Lu still further discloses that the ring table provides the necessary intelligence for the individual network elements and is used by the network elements for decision making processes, for example, autoprovisioning and self-healing operations, as well as other management functions (col. 5, lines 63-67; claims 1 – failure in the permanent sub-network connection is permitted to be corrected prior to a tear down of the permanent sub-network connection).

Lu still further discloses that upon occurrence of a failure, the ring table may be revised or modified to reflect the new provisioning of the paths (col. 13, lines 54-56; claims1 – tear down of the permanent sub-network connection).

Lu does not disclose defining a time out period to be associated with the permanent sub-network connection.

Mendelson discloses that ANC 250 of Fig. 2 periodically queries the ATU-R 22 to determine the state of the activity time-out counter. Mendelson shows in Fig. 5, at some point, in step 526, the ATU-R 222 reports that a time-out has occurred. Mendelson

discloses, in response to this report, the ANC 250, in step 528, causes the ATM network 210 of Fig. 2 to tear down the VC 266, thereby releasing network resources (Col. 16, lines 5-16; claim 1 - defining a time out period to be associated with the permanent sub-network connection).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention was made to combine the sub-network system of Lu with the time-out feature of Mendelson so that the network resources can be used by the network for other connections as necessary. One skilled in the art would have been motivated to combine Lu with Mendelson (collectively "Lu-Mendelson") to generate the claimed invention with a reasonable expectation of success.

3.   Regarding claims 2-5,

Lu-Mendelson discloses a method that covers all the limitations of the parent claim.

Lu-Mendelson discloses that the ring table (DTL) is updated, as necessary, through network element to network element and/or network element to OSS communications using standard communication protocols and messages (signaling) (Lu, Col. 6, lines 3-6; claim 2 – receiving an explicit route definition from a user defining the working path; claim 3 – dynamically determining a working path including signaling nodes in the network to determine an optimal route between the ingress node and the egress node; claim 4 – creating a DTL to describe the route; claim 5 – distributing the DTL to all other nodes along the route).

4.   Regarding claims 6, 7, and 10,

Lu-Mendelson discloses a method that covers all the limitations of the parent

claim.

Lu-Mendelson discloses that in addition to providing path provisioning

information and node provisioning information, the ring provisioning table also provides

time slot interchange (TSI) information. Lu-Mendelson further discloses that in order to

provide TSI information, the same SONET ring path ID will appear at different rows/time

slots under the same column of a node to indicate that it was dropped from a first

channel and added to a different channel (Lu, Col. 12, lines 9-16; claim 6 – determining

if a proposed route satisfies network constraints; claim 7 – determining if resources are

available in each node in a proposed route; claim 10 – determining if a proposed route

satisfies predetermined node requirements for each node in the proposed route).

5.   Regarding claim 8,

Lu-Mendelson discloses a method that covers all the limitations of the parent

claim.

Lu-Mendelson discloses that the ring table (DTL) is updated, as necessary,

through network element to network element and/or network element to OSS

communications using standard communication protocols and messages (signaling).

Lu-Mendelson further discloses that the ring table is capable of supporting SONET ring

management functions including autoprovisioning (Lu, Col. 6, lines 3-9; claim 8 -

determining if resources are available includes signaling each node in the proposed

route to determine if resources are available in each respective node).

6.   Regarding claim 9,

        Lu-Mendelson discloses a method that covers all the limitations of the parent

claim.

        Lu-Mendelson discloses that ANC 250 of Fig. 2 periodically queries the ATU-R

22 to determine the state of the activity time-out counter. Mendelson shows in Fig. 5, at

some point, in step 526, the ATU-R 222 reports that a time-out has occurred.

Mendelson discloses, in response to this report, the ANC 250, in step 528, causes the

ATM network 210 of Fig. 2 to tear down the VC 266, thereby releasing network

resources (Mendelson, Col. 16, lines 5-10; claim 9 - determining an amount of time to

wait prior to clearing resources for the route after a failure has been detected along the

route).

7.   Regarding claims 11 and 13,

        Lu-Mendelson discloses a method that covers all the limitations of the parent

claim.

        Lu-Mendelson discloses that the adapter needs to be able to determine whether

the destination is reachable at all over the network, and if so, what address, quality of

service, security parameters and other parameters to use in establishing a new VC

(Mendelson, Col. 3, lines 58-61; claim 11- quality of service requirements for a given

node; claim 13 - determining if no route can be defined that satisfies the network and

node requirement, and not provisioning the route).

8.   Regarding claim 12,

        Lu-Mendelson discloses a method that covers all the limitations of the parent

claim.

        Lu-Mendelson discloses that when an adapter accepts a packet from a network,

the adapter needs to be able to determine whether to transmit it on the connection-

oriented network over an existing connection or to create a new connection, and if the

latter, which connection-oriented network endpoint to target and what parameters

should be used in the new connection (Mendelson, Col. 3, lines 47-52; claim 12 -

determining if the route can be provisioned, and if not, automatically calculating a

working path that satisfies network and node requirements).

9.   Regarding claims 14,18, and 19,

        Lu discloses that the protection channels are used for restoring normal traffic

when a node failure of fiber cut occurs (col. 8, lines 28-33; claim 14 – detecting a failure

in a path included in the permanent sub-network connection between an ingress and

egress node; claim 18 – detecting a failure in path in the network; determining if the

path includes a permanent sub-network connection; and if so for each permanent sub-

network connection; claim 19 – detecting a failure in a path in the network).

Lu further discloses that the ring table provides the necessary intelligence for the individual network elements and is used by the network elements for decision making processes, for example, autoprovisioning and self-healing operations, as well as other management functions (col. 5, lines 63-67). Lu still further discloses automatic protection switching (col. 6, lines 6-10; claims 14, 18 – determining if the failure has been corrected).

Lu still further discloses that upon occurrence of a failure, the ring table may be revised or modified to reflect the new provisioning of the paths (col. 13, lines 54-56; claims14, 18 – if the failure has not been corrected, deallocating resources associated with the permanent sub network connection; immediately clearing resources for all sub-network connections traversing the path).

Lu does not disclose determining if a predetermined time out period has expired.

Mendelson discloses that ANC 250 of Fig. 2 periodically queries the ATU-R 22 to determine the state of the activity time-out counter. Mendelson shows in Fig. 5, at some point, in step 526, the ATU-R 222 reports that a time-out has occurred. Mendelson discloses, in response to this report, the ANC 250, in step 528, causes the ATM network 210 of Fig. 2 to tear down the VC 266, thereby releasing network resources (Col. 16, lines 5-16; claim 14, 18 - determining if a predetermined time out period has expired; claim 19 – waiting a pre-determined time out period).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention was made to combine the sub-network system of Lu with the time-out feature of Mendelson so that the network resources can be used by the network for

other connections as necessary. One skilled in the art would have been motivated to combine Lu with Mendelson (collectively "Lu-Mendelson") to generate the claimed invention with a reasonable expectation of success.

10.   Regarding claims 15 and 16,

Lu-Mendelson discloses a method that covers all the limitations of the parent claim.

Lu-Mendelson discloses that ANC 250 of Fig. 2 of Mendelson periodically queries the ATU-R 222 to determine the state of the activity time-out counter. Lu-Mendelson shows in Fig. 5 of Mendelson, at some point, in step 526, the ATU-R 222 reports that a time-out has occurred. Lu-Mendelson discloses, in response to this report, the ANC 250, in step 528, causes the ATM network 210 of Fig. 2 of Mendelson to tear down the VC 266, thereby releasing network resources (Mendelson, col. 16, lines 5-16; claim 15 - retrieving a time out period value associated with the failed permanent sub-network connection and initiating a timer with the time out period value; claim 16 - signaling, by one or more nodes in a path forming the permanent sub-network connection between the ingress and egress nodes, to other nodes in the path instructions to tear down the path).

11.   Regarding claim 17,

Lu-Mendelson discloses a method that covers all the limitations of the parent claim.

Lu-Mendelson discloses that once the failure has been rectified (i.e., the

hardware has been repaired), normal traffic is recovered without reprovisioning the

SONET ring. That is, after the failure has been rectified, the ring table stored in the

nodes are utilized to recover or restore the normal traffic; even for the nodes directly

affected by the failure. If the failure causes a node to lose the ring table, that node can

request and receive the ring table from a neighboring node (as the ring tables stored in

each of the nodes are identical). Therefore, full recovery and autoprovisioning is

realized after the hardware failure is eliminated. This recovery is performed without

intervention from any outside management systems (Lu, col. 13, lines 61-68; claim 17 -

storing route information associated with the permanent sub-network connection prior to

tear down such that at a time for restoring the permanent sub-network connection, no

optimal routing determination is required).

Response to Arguments

12.   Applicant's arguments filed 12/20/2005 regarding claims 1, 14, 18, and 19 have

been fully considered but they are not persuasive.

-    In the remarks on pgs. 6-9 of the Amendment, the Applicant contends that

     the timer of Mendelson is incompatible with the P-SNC's of Lu and the

     present invention, and a time-out period providing for the possible

     remediation of a failure is not disclosed, taught, or suggested. Therefore,

the Applicant's further contend, there is no motivation for the Lu-Mendelson combination.

- In response to applicant's argument that Mendelson is nonanalogous art, it has been held that a prior art reference must *either* be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the examiner agrees that the Mendelson reference does not "provide for the possible remediation of a failure." However, the Lu reference does in col. 5, lines 63-67, where Lu discloses that the "ring table provides the necessary intelligence for the individual network elements and is used by the *network elements for decision making processes in*, for example, autoprovisioning and *self-healing operations*, as well as other management functions." (Emphasis Added). The decision making process in the self-healing operations *suggest* a timer element, which Lu does not explicitly disclose. The timer element equates to the "particular problem" mentioned above in the *Oetiker* case above. Thus, the Mendelson reference does not have to be in the field of applicant's endeavor (possible remediation of *failure*), it just needs to be reasonably pertinent to the particular problem with which the applicant was concerned (time-out period), which Mendelson does in col. 16, lines 5-8, where he

discloses, "ANC periodically queries the ATU-R 222 to determine the state of the activity time-out counter," as cited in the first Office action in the rejection to claims 1, 14, 18, and 19. The motivation to combine Lu and Mendelson is to release network resources as discussed by the Examiner in the rejection to claims 1, 14, 18, and 19 and is specifically disclosed by Mendelson in col. 16, line 10.

Conclusion

13.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Sol whose telephone number is (571) 272-5949. The examiner can normally be reached on M-F 7:30am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AMS

2/27/2006

JOHN PEZZLO
PRIMARY EXAMINER